

Claims

1. A marine fuel supply system to supply liquid fuel to an internal combustion engine of a marine craft, the fuel supply system comprising a reservoir to store the liquid fuel, at least one fuel pump to pump fuel from the reservoir to the engine and at least one sensor located between the reservoir and the engine wherein the or each sensor is arranged to detect the presence of sea water in the fuel and provide an indication to an operator of the marine craft.
2. A fuel supply system as claimed in claim 1 in which the presence of sea water is indicated by an audible warning device.
3. A fuel supply system as claimed in claim 1 or in claim 2 in which the presence of sea water is indicated by a visual warning device.
4. A fuel supply system as claimed in any preceding claim in which the indication of the presence of water is provided to more than one location on the marine craft.
5. A fuel supply system as claimed in any of claims 1 to 4 in which the or each sensor is located between an outlet from the reservoir and an inlet to a fuel pump.
6. A fuel supply system as claimed in claim 5 in which the fuel supply system further comprises of a fuel filter located between the fuel pump and the engine.
7. A fuel supply system as claimed in any of claims 1 to 5 in which the system has a low pressure fuel pump connected to an outlet from the reservoir and a high pressure fuel pump connected to the low pressure fuel pump to supply fuel at high pressure to the engine and the or each sensor is located between the outlet from the reservoir and the low pressure fuel pump.
8. A fuel supply system as claimed in claim 7 in which a fuel filter is located between the low pressure fuel pump and the high pressure fuel pump.

9. A fuel supply system as claimed in any of claims 1 to 8 in which the or each sensor is mounted near to the bottom of a water separator used to separate sea water from the liquid fuel.
- 5 10. A fuel supply system as claimed in 9 in which the water separator comprises of a closed vessel having an upper wall, a lower wall, at least one side wall, an inlet to the closed vessel and an outlet from the closed vessel.
11. A fuel supply system as claimed in 10 in which the inlet to the closed vessel
10 and the outlet from the closed vessel are connected to the upper wall of the closed vessel.
12. A fuel supply system as claimed in claim 10 or in claim 11 in which there is at least one baffle plate interposed between the inlet to the closed vessel and the outlet
15 from the closed vessel.
13. A fuel supply system as claimed in claim 12 in which there is at least one baffle plate extending downwardly from the upper wall into the closed vessel at a position between the inlet to the closed vessel and the outlet from the closed vessel.
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14. A fuel supply system as claimed in claim 12 when dependent upon claim 11 in which there is a baffle plate extending outwardly from the or one side wall of the closed vessel in close proximity to the outlet from the closed vessel.
- 25 15. A fuel supply system as claimed in any of claims 10 to 14 in which an air bleed device is fitted to the upper wall.
16. A fuel supply system as claimed in any of claims 10 to 15 in which a drain plug is fitted to the lower wall of the closed vessel.
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17. A fuel supply system as claimed in any of claims 10 to 16 in which at least one sensor is fitted to the or one of the side walls of the closed vessel in close proximity to the lower wall.

18. A fuel supply system as claimed in any of claims 10 to 17 in which at least one sensor is fitted to the lower wall of the closed vessel.
19. A fuel supply system as claimed in claim 17 or in claim 18 in which the or
5 each sensor is located such that when sea water reaches a predetermined level in the closed vessel the indication is provided to the operator.
20. A marine craft having at least one internal combustion engine and at least one fuel supply system as claimed in any of claims 1 to 19.
- 10 21. A marine craft as claimed in claim 20 in which the fuel supply system is arranged to supply an indication of the presence of sea water in the fuel to at least two separate craft control stations.
- 15 22. A marine craft as claimed in claim 21 in which one of the control stations is a flying bridge.
23. A marine craft as claimed in claim 22 in which the craft has two control stations and the other control station is a main deck control station.
- 20 24. A marine fuel supply system substantially as described herein with reference to the accompanying drawing.
- 25 25. A marine craft substantially as described herein with reference to the accompanying drawing.
26. A water separator for use in a marine fuel supply system to separate sea water from fuel comprising a closed vessel having an upper wall, a lower wall, at least one side wall, an inlet to the closed vessel and an outlet from the closed vessel.
- 30 27. A water separator substantially as described herein with reference to the accompanying drawing.